

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An information recording apparatus comprising:
 - a substitute information generating device for generating substitute information having a data length within a range correctable by an error correction capability by using identification information unique to each of information recording media in which recording information is to be recorded, the recording information generated as a unit of an error correction;
 - a substituting device for substituting part of the recording information with the generated substitute information; and
 - a recording device for recording the recording information, part of which is substituted with the generated substitute information, in the information recording medium corresponding to the identification information used for the generation of the substitute information,
 - ~~wherein the generated substitute information has a data length within a range correctable by an error correction capability,~~
 - wherein the substituting device has a function of changing a substitution position, at which the part of the recording information is substituted with the generated substitute information, in said unit of an error correction,
 - wherein the substituting device substitutes the part of the recording information with the generated substitute information in a plurality of the units of the error correction, and changes the

substitution position for each of the units on the basis of substitution position information indicating the substitution position.

2. (previously presented): The information recording apparatus according to Claim 1, wherein the information recording apparatus further comprises a generating device for encrypting the recording information by using predetermined key information to generate encrypted recording information, wherein the substituting device substitutes part of the generated encrypted recording information with the generated substitute information, and the recording device records the key information, together with the generated encrypted recording information including the generated substitute information, in the information recording medium corresponding to the identification information used for the generation of the substitute information.

3. (original): The information recording apparatus according to Claim 2, wherein the substitute information generating device generates the substitute information including the key information.

4. (original): The information recording apparatus according to Claim 2, wherein the information recording apparatus further comprises a key information encrypting device for encrypting the key information by using the identification information to generate encrypted key information, wherein the recording device records the generated encrypted key information in place of the key information, in the information recording medium.

5. (original): The information recording apparatus according to Claim 4, wherein the information recording apparatus further comprises an identification information encrypting device for encrypting the identification information by performing a predetermined encrypting process to generate encrypted identification information, wherein the key information encrypting device encrypts key information by using the generated encrypted identification information to generate the encrypted key information.

6. (original): The information recording apparatus according to Claim 1, wherein the substitute information generating device generates the substitute information by using encrypted identification information obtained through a predetermined encrypting process performed to the identification information.

7. (original): The information recording apparatus according to Claim 5, wherein the encrypting process is a process to encrypt the identification information by using a predetermined unidirectional encrypting function.

8. (original): The information recording apparatus according to Claim 1, wherein the information recording apparatus further comprises an adding device for adding a correction code for error correction to the recording information to generate added recording information, wherein the substituting device substitutes the generated substitute information for part of the added record information to generate the substituted recording information.

9. (previously presented): The information recording apparatus according to Claim 1, wherein the recording device records the identification information used for the generation of the substitute information, together with the recording information including the generated substitute information, in the information recording medium corresponding to the identification information.

10. (previously presented): The information recording apparatus according to Claim 1, wherein the identification information is recorded in advance on the corresponding information recording medium, and the substitute information generating device detects the recorded identification information used for the generation of the substitute information.

11. (original): The information recording apparatus according to Claim 1, wherein the substituting device varies a mode of the substitution using the substitute information by using the identification information.

12. (canceled).

13. (canceled).

14. (currently amended): An information recording medium in which recording information is to be recorded, the recording information generated as a unit of an error correction, comprising:

an information recording region for recording the recording information, part of which is substituted at a substitute position with substitute information generated by using identification information unique to each of the information recording media; and

an identification information recording region in which the identification information corresponding to the information recording medium is recorded,

wherein the generated substitute information has a data length within a range correctable by an error correction capability,

wherein there is a recording information in which the substitution position is different from ~~the~~ a substitution position of other recording information recorded in the unit of the error correction in the recording medium,

wherein the part of the recording information is substituted at the substitute position with substitute information in a plurality of the units of the error correction,

wherein the substitute position is changed for each of the units on the basis of substitute position information indicating the substitute position is recorded.

15. (previously presented): The information recording medium according to Claim 14, wherein information recorded in the information recording region is obtained by substituting part of encrypted recording information with the generated substitute information, the encrypted recording information being obtained through encryption of the recording information by using predetermined key information.

16. (canceled).

17. (currently amended): An information reproducing apparatus for reproducing information from an information recording medium in which recording information as a unit of an error correction and identification information corresponding to the information recording medium are recorded, part of the recording information being substituted at a substitute position with substitute information in a plurality of the units of the error correction, the substitute information being generated by using the identification information unique to each of the information recording media, the substitute position being changed for each of the units on the basis of substitute position information indicating the substitute position, the substitute information having a data length within a range correctable by an error correction capability; the information reproducing apparatus comprising:

a detecting device for detecting the recording information, part of which is substituted with the generated substitute information from the information recording medium,

an identification information detecting device for detecting the identification information from the information recording medium;

a substitute information extracting device for extracting the substitute information from the detected recording information by using the substitute position information;

an identification information extracting device for extracting the identification information from the extracted substitute information;

a comparing device for comparing the identification information extracted from the substitute information with the identification information detected from the information recording medium; and

a reproducing device for reproducing the recording information obtained from the detected recording information only if the identification information extracted from the substitute

information matches the identification information detected from the information recording medium,

~~wherein the generated substitute information, has a data length within a range correctable by an error correction capability;~~

wherein there is a recording information in which the substitution position is different from ~~the~~ a substitution position of other recording information recorded in the unit of the error correction in the recording medium.

18. (previously presented): The information reproducing apparatus according to Claim 17, wherein:

the recording information, part of which is substituted with the generated substitute information, is obtained by substituting part of encrypted recording information with the generated substitute information, the encrypted recording information being obtained through encryption of the recording information by using a predetermined key information;

the key information and the obtained recording information are recorded in the information recording medium corresponding to the identification information used for the generation of the substitute information;

the information reproducing apparatus further comprises a key information detecting device for detecting the key information from the information recording medium; and

the reproducing device decrypts the encrypted recording information obtained from the detected recording information by using the detected key information and reproduces the recording information only if the identification information extracted from the substitute

information matches the identification information detected from the information recording medium.

19. (original): The information reproducing apparatus according to Claim 18, wherein the key information is contained in the substitute information and recorded in the information recording medium, and the key information detecting device detects the key information from the extracted substitute information.

20. (previously presented): The information reproducing apparatus according to Claim 18, wherein:

encrypted key information obtained through encryption of the key information by using the identification information is recorded in the information recording medium in place of the key information;

the key information detecting device detects the encrypted key information from the information recording medium;

the information reproducing apparatus further comprises key information generating device for generating the key information through decryption of the detected encrypted key information by using the detected identification information; and

the reproducing device decrypts the encrypted recording information obtained from the detected recording information by using the generated key information and reproduces the record information only if the identification information extracted from the substitute information matches the identification information detected from the information recording medium.

21. (original): The information reproducing apparatus according to Claim 20, wherein:

the encrypted key information is obtained through the encryption of the key information by using encrypted identification information obtained from a predetermined encrypting process performed to the identification information and is recorded in the information recording medium; and

the key information generating device decrypts the detected encrypted key information by using the encrypted identification information obtained from the encrypting process performed to the detected identification information.

22. (original): The information reproducing apparatus according to Claim 21, wherein the encrypting process encrypts information by using a predetermined unidirectional encrypting function.

23. (previously presented): The information reproducing apparatus according to Claim 17, wherein:

the substitute information is generated by using encrypted identification information obtained by a predetermined encrypting process performed to the identification information corresponding to the information recording medium in which the recording information is to be recorded;

the information reproducing apparatus further comprises an identification information generating device for extracting the encrypted identification information from the extracted substitute information, decrypting the encrypted identification information by a decrypting

process corresponding to the encrypting process, and generating the identification information;
and

the reproducing device reproduces the recording information only if the generated identification information matches the identification information detected from the information recording medium.

24. (previously presented): The information reproducing apparatus according to Claim 17, wherein:

the substitute information is generated by using encrypted identification information obtained through a predetermined encrypting process using a predetermined unidirectional encrypting function performed on the identification information corresponding to the information recording medium in which the recording information is to be recorded;

the information reproducing apparatus further comprises an encrypted identification information extracting device for extracting the encrypted identification information from the extracted substitute information, and an encrypted identification information generating device for generating second encrypted identification information through the encrypting process by using the encrypting function performed to the detected identification information; and

the reproducing device reproduces the recording information only if the generated second encrypted identification information matches the extracted encrypted identification information.

25. (previously presented): The information reproducing apparatus according to Claim 17, wherein:

the recording information, part of which is substituted with the generated substitute information, is obtained by substituting part of added recording information with the generated substitute information, the added recording information being generated by adding a correction code for error correction to the recording information and is recorded in the information recording medium;

the substitute information extracting device extracts the substitute information from the recording information before the error correction is executed; and

the information reproducing apparatus further comprises a correcting device for performing an error correction process on the detected recording information by using the correction code.

26. (previously presented): The information reproducing apparatus according to Claim 17, wherein:

a mode of the substitution using the identification information in the recording information is varied by using the substitute information; and

the substitute information extracting device extracts the substitute information from the detected recording information based on the mode of the substitution specified by using the detected identification information.

27. (canceled).

28. (canceled).

29. (currently amended): An information recording method comprising:

a substitute information generating process of generating substitute information having a data length within a range correctable by an error correction capability by using identification information unique to each of information recording media in which recording information is to be recorded, the recording information generated as a unit of an error correction;

a substituting process of substituting the generated substitute information; and

a recording process of recording the recording information, part of which is substituted with the generated substitute information, in the information recording medium corresponding to the identification information used for the generation of the substitute information,

~~wherein the generated substitute information, has a data length within a range correctable by an error correction capability,~~

wherein the substituting process has a function of changing a substitution position, at which the part of the recording information is substituted with the generated substitute information, in said unit of an error correction,

wherein the substituting process substitutes the part of the recording information with the generated substitute information in a plurality of the units of the error correction, and changes the substitution position for each of the units on the basis of substitution position information indicating the substitution position.

30. (previously presented): The information recording method according to Claim 29, wherein the information recording method further comprises a generating process of encrypting the recording information by using a predetermined key information to generate encrypted recording information, wherein the substituting process substitutes part of the

generated encrypted recording information with the generated substitute information, and the recording process records the key information, together with the generated encrypted recording information including the generated substitute information, in the information recording medium corresponding to the identification information used for the generation of the substitute information.

31. (canceled).

32. (currently amended): An information reproducing method for reproducing information from an information recording medium in which recording information as a unit of an error correction and identification information corresponding to the information recording medium are recorded, part of the recording information being substituted at a substitute position with substitute information in a plurality of the units of the error correction, the substitute information being generated by using the identification information unique to each of the information recording media, the substitute position being changed for each of the units on the basis of substitute position information indicating the substitute position, the substitute information having a data length within a range correctable by an error correction capability; the information recording method comprising:

a detecting process of detecting the recording information, part of which is substituted with the generated substitute information from the information recording medium;

an identification information detecting process of detecting the identification information from the information recording medium;

a substitute information extracting process of extracting the substitute information from the detected recording information by using the substitute position information;

an identification information extracting process of extracting the identification information from the extracted substitute information;

a comparing process of comparing the identification information extracted from the substitute information with the identification information detected from the information recording medium; and

a reproducing process of reproducing the recording information obtained from the detected recording information only if the identification information extracted from the substitute information matches the identification information detected from the information recording medium,

~~wherein the generated substitute information, has a data length within a range correctable by an error correction capability,~~

wherein there is a recording information in which the substitution position is different from ~~the~~ a substitution position of other recording information recorded in the unit of error correction in the recording medium.

33. (previously presented): The information reproducing method according to Claim 32, wherein:

the recording information, part of which is substituted with the generated substitute information, is obtained by substituting part of encrypted recording information with the generated substitute information, the encrypted recording information being obtained through encryption of the recording information by using a predetermined key information;

the key information and the obtained recording information are recorded in the information recording medium corresponding to the identification information used for the generation of the substitute information;

the information reproducing method further comprises a key information detecting process of detecting the key information from the information recording medium; and

the reproducing process decrypts the encrypted recording information obtained from the detected recording information by using the detected key information and reproduces the recording information only if the identification information extracted from the substitute information matches the identification information (Sid) detected from the information recording medium.

34. (canceled).

35. (currently amended): A program information recording medium in which an information recording control program is readably recorded by a computer included in an information recording apparatus for recording information in an information recording medium, the information recording control program causing the computer to function as information recording control devices, the information recording control devices comprising:

a substitute information generating device for generating substitute information having a data length within a range correctable by an error correction capability by using identification information unique to each of information recording media in which recording information is to be recorded, the recording information generated as a unit of an error correction;

a substituting device for substituting part of the recording information with the generated substitute information; and

a recording device for recording the recording information, part of which is substituted with the generated substitute information, in the information recording medium corresponding to the identification information used for the generation of the substitute information,

~~wherein the generated substitute information, has a data length within a range correctable by an error correction capability,~~

wherein the substituting device has a function of changing a substitution position, at which the part of the recording information is substituted with the generated substitute information, in said unit of an error correction,

wherein the substituting device substitutes the part of the recording information with the generated substitute information in a plurality of the units of the error correction, and changes the substitution position for each of the units on the basis of substitution position information indicating the substitution position.

36. (previously presented): The program information recording medium according to Claim 35, wherein the information recording control program causes the computer to function as information recording control devices, the information recording control devices further comprising a generating device for encrypting the recording information by using predetermined key information to generate encrypted recording information, wherein

the substituting device substitutes part of the generated encrypted recording information with the generated substitute information, and

the recording device records the key information, together with the generated encrypted recording information including the generated substitute information, in the information recording medium corresponding to the identification information used for the generation of the substitute information.

37. (canceled).

38. (currently amended): A program information recording medium in which an information reproducing control program is readably recorded by a computer included in an information reproducing apparatus for reproducing information from an information recording medium in which recording information and identification information corresponding to the information recording medium are recorded, part of the recording information being substituted at a substitute position with substitute information in a plurality of the units of the error correction, the substitute information being generated by using the identification information unique to each of the information recording media, the substitute position being changed for each of the units on the basis of substitute position information indicating the substitute position, the substitute information having a data length within a range correctable by an error correction capability; the information reproducing control program causing the computer to function as information reproducing control devices, the information reproducing control devices comprising:

a detecting device for detecting the recording information, part of which is substituted with the generated substitute information, from the information recording medium;

an identification information detecting device for detecting the identification information from the information recording medium;

a substitute information extracting device for extracting the substitute information from the detected recording information by using the substitute position information;

an identification information extracting device for extracting the identification information from the extracted substitute information;

a comparing device for comparing the identification information extracted from the substitute information with the identification information detected from the information recording medium; and

a reproducing device for reproducing the recording information obtained from the detected recording information only if the identification information extracted from the substitute information matches the identification information detected from the information recording medium,

~~wherein the generated substitute information, has a data length within a range correctable by an error correction capability,~~

wherein there is a recording information in which the substitution position is different from ~~the~~ a substitution position of other recording information recorded in the unit of the error correction in the recording medium.

39. (previously presented): The program information recording medium according to Claim 38, wherein:

the recording information, part of which is substituted with the generated substitute information, is obtained by substituting part of encrypted recording information with the

generated substitute information, the encrypted recording information being obtained through encryption of the recording information by using a predetermined key information (Sk);

the key information and the obtained recording information are recorded in the information recording medium corresponding to the identification information used for the generation of the substitute information;

the information reproducing control program causes the computer to function as information reproducing control devices, the information reproducing control devices further comprising a key information detecting device for detecting the key information from the information recording medium; and

the reproducing device decrypts the encrypted recording information obtained from the detected recording information by using the detected key information and reproduces the recording information only if the identification information extracted from the substitute information matches the identification information detected from the information recording medium.

40. (canceled).

41. (previously presented): The information recording apparatus according to claim 1, wherein the substitute position is set in advance and is used in common between the information recording apparatus and an information reproducing apparatus.

42. (previously presented): The information recording medium according to claim 14, wherein the substitute position is set in advance and is used in common between an information

recording apparatus for recording the recording information and an information reproducing apparatus for reproducing the recording information.

43. (previously presented): The information reproducing apparatus according to claim 17, wherein the substitute position is set in advance and is used in common between an information recording apparatus for recording the recording information and the information reproducing apparatus.

44. (previously presented): The information recording method according to claim 29, wherein the substitute position is set in advance and is used in common between an information recording apparatus for recording the recording information and an information reproducing apparatus for reproducing the recording information.

45. (previously presented): The information reproducing method according to claim 32, wherein the substitute position is set in advance and is used in common between an information recording apparatus for recording the recording information and an information reproducing apparatus for reproducing the recording information.

46. (previously presented): The program information recording medium according to claim 35, wherein the substitute position is set in advance and is used in common between the information recording apparatus and an information reproducing apparatus.

47. (previously presented): The program information recording medium according to claim 38, wherein the substitute position is set in advance and is used in common between an information recording apparatus and the information reproducing apparatus.

48. (new): The information recording apparatus according to claim 1, wherein the substituting device substitutes a part of substantive information included in the recording information with the generated substitute information in all of the units of the error correction corresponding to the substantive information.

49. (new): The information recording medium according to claim 14, wherein a part of substantive information included in the recording information is substituted with the generated substitute information in all of the units of the error correction corresponding to the substantive information.

50. (new): The information reproducing apparatus according to claim 17, wherein the detecting device detects substantive information included in the recording information, a part of substantive information which is substituted with the generated substitute information in all of the units of the error correction corresponding to the substantive information.

51. (new): The information recording method according to claim 29, wherein the substituting process substitutes a part of substantive information included in the recording information with the generated substitute information in all of the units of the error correction corresponding to the substantive information.

52. (new): The information reproducing method according to claim 32, wherein the detecting process detects substantive information included in the recording information, a part of substantive information which is substituted with the generated substitute information in all of the units of the error correction corresponding to the substantive information.

53. (new): The program information recording medium according to claim 35, wherein the substituting device substitutes a part of substantive information included in the recording information with the generated substitute information in all of the units of the error correction corresponding to the substantive information.

54. (new): The program information recording medium according to claim 38, wherein the detecting device detects substantive information included in the recording information, a part of the substantive information which is substituted with the generated substitute information in all of the units of the error correction corresponding to the substantive information.